CRANE MACHINES

Generalized User Manual

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This user manual is intended to get users familiar with our Crane Machines. It contains details about the proper use and precautions. It also provides solutions to problems you may encounter while using our games. Users can find more information about this product through other means by contacting our Company. Your valuable opinions and advice are greatly appreciated.

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Operating Instructions (claw grip strength calibration):

For a smooth operation of the crane machine, please pay attention to the following precautions：

Prior to putting the crane machine in operation or every time a different prize (shape, size, weight) is being used, be sure to calibrate the claw's grip strength based on the prize being used.

The calibration of the grip strength is as followed:

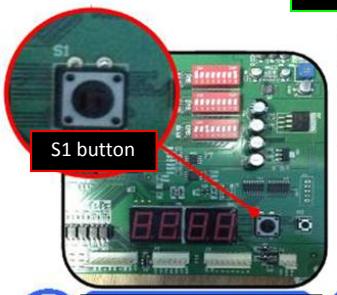
1. While machine is on standby, press the S1 key of the main board to access back end Setup mode.
2. Press the S1 key to change the digits on the Digit Panel of the main board, until you see “50” (50 indicates the strong grip calibration option, the right side of the digit panel shows the strong grip value being set).
3. Adjust the strong grip value, up or down, by operating the joystick (the right side of the digit panel shows the strong grip value being set).
4. When calibrating the strength, put the prize within the claw. Press the "OK" button on the control panel to set the value. Observe the strong grip; press the “OK” button to let the claw grab the prize and release your hand from the prize (for about 3 seconds). If the claw can hold the prize firmly and the prize does not fall, it means the strong grip is appropriate.
5. After the strong grip has been calibrated, press the S1 key of the main board to switch to “60” (60 indicates the weak grip calibration option, the right side of the digit panel shows the weak grip value being set).
6. When calibrating the strength, put the prize within the claw. Press the "OK" button on the control panel to set the value. Observe the weak grip; press the “OK” button to let the claw grab the prize and release your hand from the prize (for about 3 seconds). If the claw can slightly hold the prize but the prize falls smoothly, also observe that the claw closes after the prize dropped, it means the weak grip is appropriate.
7. After calibration is complete, reboot the machine.

Suggested prize size

Make sure you buy the prize (plush toy) based on the claw size.

L * W * H: (10 ~ 15) * (10 ~ 15) * (15 ~ 25) cm

Or purchase plush toy sizes 5 or 6.

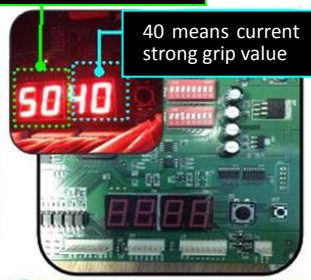


S1 button

① While machine is on standby, press main board S1 key to access backend Setup mode.

50 means strong grip calibration mode

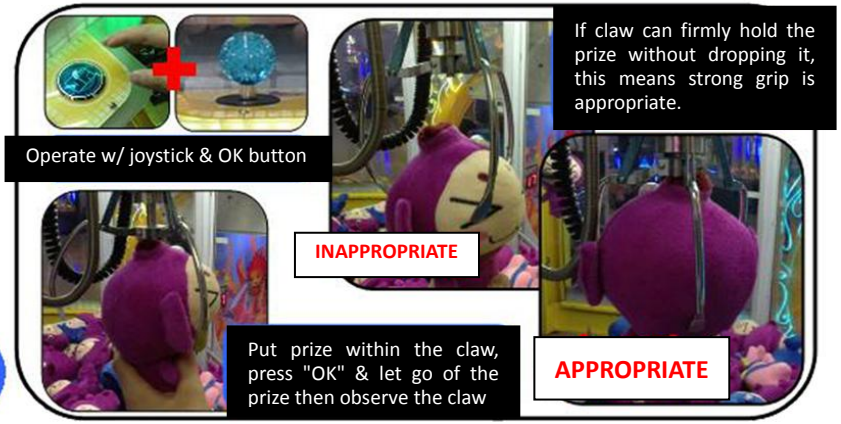
40 means current strong grip value



② Press S1 key to change the digits on the main board Digit Panel, switch to strong grip calibration mode.

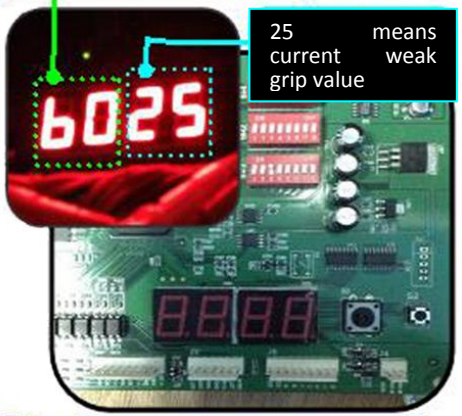
③ Adjust the strong grip value, up or down, by operating the joystick.

④


Operate w/ joystick & OK button
INAPPROPRIATE
If claw can firmly hold the prize without dropping it, this means strong grip is appropriate.
Put prize within the claw, press "OK" & let go of the prize then observe the claw
APPROPRIATE

60 means weak grip calibration mode

25 means current weak grip value



⑤ Press main board S1 key again to switch menu number, switch to weak grip calibration mode.

⑥

Operate w/ joystick & OK button
INAPPROPRIATE
If the claw can slightly hold the prize and the prize smoothly drops, also the claw would close itself after the prize dropped. This means the weak grip is appropriate.
Put the prize within the claw, press the "OK" buttong & let go of the prize then observe the claw.
APPROPRIATE

⑦ After calibration is complete, reboot machine.

The pictures above are methods for calibrating the strong/weak claw

Prize Probability Settings:

Recommended settings

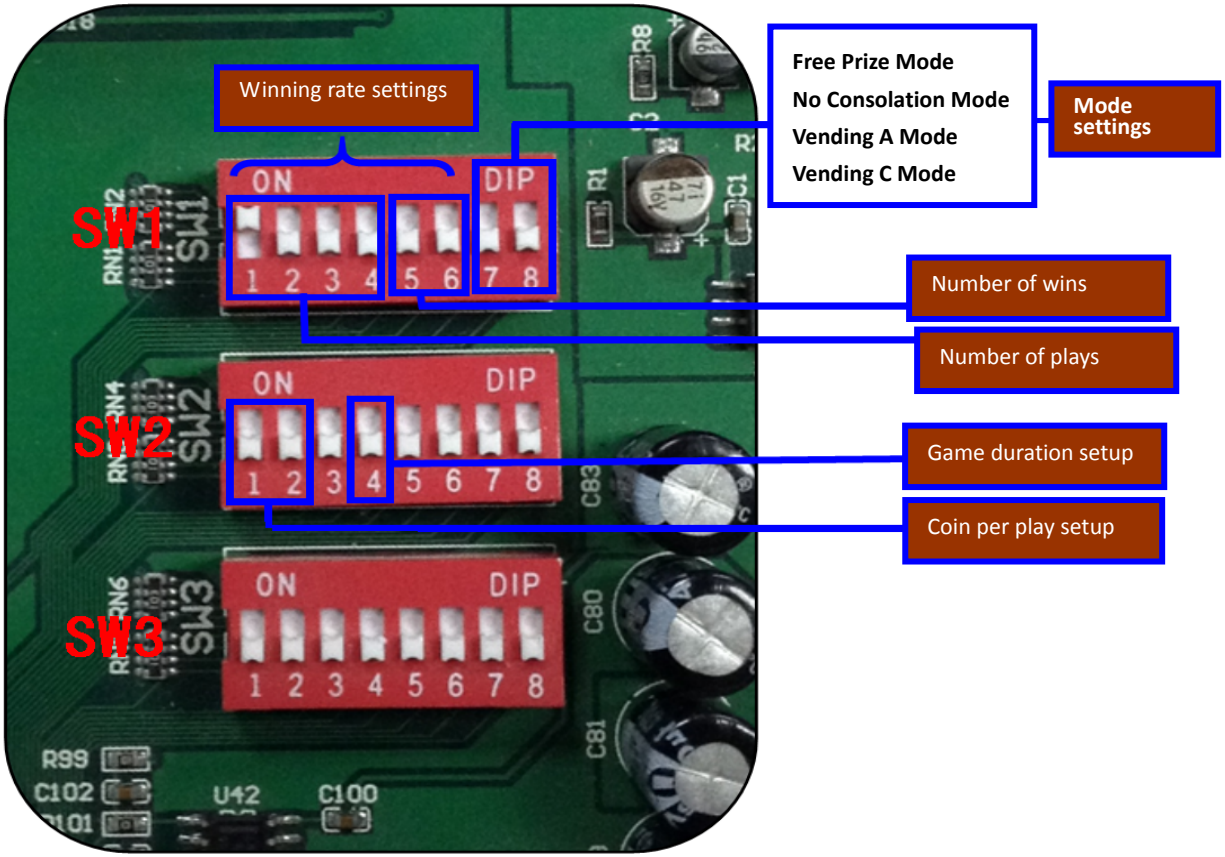
(the recommended settings are as figure on the right)
The result of these settings are:

① **Free prize (consolation) mode,**
Win one prize per 10 plays; if player does not win after 10 plays, free 100% winning rate will be activated until player wins the prize.

② 1 coin for 1 play

For more detailed settings, refer to the user manual.

DIP Coding Switches Settings as below:



（1） Winning rate and mode settings (main board DIP switch SW1)

1	2	3	4	5	6	7	8	**Mode, winning rate settings (SW1)**
						—	—	Free prize mode
						ON	—	No consolation mode
						—	ON	Vending A mode
						ON	ON	Vending C mode
				—	—			Number of wins = 1
				ON	—			Number of wins = 3 times
				—	ON			Number of wins = 5 times
				ON	ON			Number of wins = 7 times
—	—	—	—					Number of plays = 5 times
ON	—	—	—					Number of plays =10 times
—	ON	—	—					Number of plays =15 times
ON	ON	—	—					Number of plays =20 times
—	—	ON	—					Number of plays =25 times
ON	—	ON	—					Number of plays =30 times
—	ON	ON	—					Number of plays =35 times
ON	ON	ON	—					Number of plays =40 times
—	—	—	ON					Number of plays =45 times
ON	—	—	ON					Number of plays =50 times
—	ON	—	ON					Number of plays =55 times
ON	ON	—	ON					Number of plays =60 times
—	—	ON	ON					Number of plays =65 times
ON	—	ON	ON					Number of plays =70 times
—	ON	ON	ON					Number of plays =75 times
ON	ON	ON	ON					Number of plays =80 times

Note: "ON" means push to the ON side, "—" means pushed to the opposite side of ON.

(2) Coin settings, function settings (main board DIP switch SW2)

1	2	3	4	5	6	7	8	**Coin settings, function settings SW2**
					—			During standby, continuous 10 minutes background sound playing
					ON			During standby, at interval 10 minutes background sound playing
				—				No midair claw control function (when the claw is being lowered, no effect when pressing the OK button)
				ON				With midair claw control function (when the claw is being lowered, pressing the OK buttong will close the claw)
			—					Game duration is 15 seconds
			ON					Game duration is 30 seconds
		—						Crane synchronous return to start position
		ON						Crane asynchronous return to start position
—	—							1 coin for 1 game
ON	—							1 coin for 2 games
—	ON							2 coins for 1 game
ON	ON							3 coins for 1 game

Note: "ON" means push to the ON side, "—" means pushed to the opposite side of ON.

(3) Main board DIP switch SW3 (not functional)

The new program does not use SW3, so there is no need to set SW3.

Mode setting instructions:

Example: If setting Number of wins = 1, Number of plays = 10 times, the different modes are as followed:

Free prize mode: 1 chance of winning in every 10 plays; if no win after 10 plays, the free prize is activated, from the 11th play there is a high chance of winning until prize is caught. The count will be reset after prize is won.

No consolation mode: 1 chance of winning in every 10 plays; if no win after 10 plays, no free prize and no accumulation, meaning another 1 chance of winning in the next 10 plays.

Vending A mode: 1 chance of winning in every 10 plays; if no win after 10 plays, accumulate the previous chance, meaning in the next 10 plays there are 2 chances of winning and so on.

VendingC mode: insert 1 coin per play, the first 9 times will not let the player win, only from the 10th times will the winning odds start. If no winning on the 10th time, free play onward until the prize is caught. Once prize is caught, the count is reset.

Audit :

During standby, press S2 button to access audit settings

The audit settings are divided into 4 options, the audit page is displayed on the control panel digital panel while the data is displayed on the main board digital panel. Specific audit content are as followed:

Page (control panel digital panel)	Audit content (main board digital panel)
1	Total inserted coins
2	Total number of prizes won
3	Permanent inserted coins
4	Permanent number of prizes won

Note :Pressing the OK button on the control panel switches the audit page.

Clear data:

Press and hold S2 button while booting up, this will clear the statistical data.

This action will only clear the total inserted coins and total number of prizes won, and will not clear the permanent data. After clearing, the digital panel will repeatedly display 00-99, background sound will also keep playing, press the OK button of the control panel to return to the game.

Test：

During standby, press the S1 button to access the test options. The test menu is mainly used for installation or troubleshooting.

Test is divided into 6 options, test content and items as shown in table below:

<table>
<tr><th colspan="2">Testing content (test code displayed on the main board)</th><th colspan="4">Test Item Description (press S1 key to switch test items)</th></tr>
<tr><td colspan="2">10 — Sensor, micro-movement, buttons test</td><td colspan="4">Code value of switches and buttons displayed on the control panel digital pad, see [Sensor key test code table 2]</td></tr>
<tr><td colspan="2">20 — Front/back movement test</td><td colspan="4">Test forward/backward motor, control circuit, forward/backward micro-stopping switch, joystick forward and backward keys, press OK button to return to the game.</td></tr>
<tr><td colspan="2">30 — Left/right movement test</td><td colspan="4">Test left and right motor, control circuit, left and right micro-stopping switch, joystick left and right keys, press OK button to return to the game</td></tr>
<tr><td colspan="2">40 — Up/down movement test</td><td colspan="4">Test up and down motor, control circuit, up and down micro-stopping switch, joystick up and down keys, press OK button to return to the game</td></tr>
<tr><td colspan="2">50 — Strong claw grip calibration test</td><td colspan="4">Set the strong grip strength when picking up, meaning when the claw is closing on the prize and right before it lifts up. Range is 16-40, default value 24.</td></tr>
<tr><td colspan="2">60 — Weak claw grip calibration test</td><td colspan="4">Set the weak grip strength maintained when the crane is moving horizontally, from pick up location to home position.</td></tr>
<tr><td colspan="2">70 — Grip height calibration</td><td colspan="4">When the claw is lifting the grip strength will gradually reduce from strong to weak, the higher the value set the higher position the strong grip will be maintained. Range is 0-15, default 8. 0 meaning random height.</td></tr>
<tr><td colspan="2">80 — Crane moving speed</td><td colspan="4">Crane moving speed. Range is 0-20, default value 5.</td></tr>
<tr><td colspan="2" rowspan="9">Sensor key test code table 2</td><td>Key value</td><td>Key name</td><td>Key value</td><td>Key name</td></tr>
<tr><td>1</td><td>Forward button</td><td>9</td><td>Forward stop button</td></tr>
<tr><td>2</td><td>Backward button</td><td>10</td><td>Backward stop button</td></tr>
<tr><td>3</td><td>Left key</td><td>11</td><td>Right stop key</td></tr>
<tr><td>4</td><td>Right key</td><td>12</td><td>Left stop key</td></tr>
<tr><td>5</td><td>Price collected key</td><td>13</td><td>Up stop key</td></tr>
<tr><td>6</td><td>Lower claw key</td><td>14</td><td>Down stop key</td></tr>
<tr><td>7</td><td>Insert coin key</td><td>15</td><td>Motherboard data clear key</td></tr>
<tr><td>8</td><td>Sensor key</td><td>16</td><td>Motherboard test button</td></tr>
</table>

Note: Before putting machine in operation, please access test menu to calibrate the claw grip strength.

Children music setting:

Push the switch 7 of the SW2 coding switch set to the up position to enable (note: toward the ON position opposite to the number position).

Free automatic game system:

Press and hold S1 button while booting up, this will access the free automatic game. This function is mainly used for QC of the machine during production. The system performs an automatic game each 99 seconds interval, operating the joystick or automatically catching the prizes at random locations.

Software upgrade：

The software version is displayed on the main board digital panel (year, month) and on the control panel digital pad (day) when machine boots up.

Please use the new program of the version number 131108.

Common errors and solutions:

In a case of a failure the Error message flashes on the control panel or main board digital panels.

Specific error information and solutions:

Error number	Error information	Solutions
02	Down stop micro-switch failure	Open the crane lid and check whether the down stop micro-switch (the one on top) is responsive, whether the cable rewinded or is deadlocked, whether cable motor is operating normally, whether relating wiring is intact.
03	Up stop jogging switch fault	Open the crane lid and check whether the up stop micro-switch (bottom one) is responsive, whether the cable rewinded or is deadlocked, whether cable motor is operating normally, whether relating wiring is intact.
04	When crane is returning to initial position, left stop micro-switch failure	Check whether the left stop micro-switch of the crane is responsive, whether the motor controlling left/right is operating, whether relating wiring is intact.
05	When crane is returning to initial position, front stop micro-switch failure	Check whether the forward stop micro-switch of the crane is responsive, whether the motor controlling forward/backward is operating, whether relating wiring is intact.

24	Motherboard EEPROM failure	Check whether solder of the motherboard memory chip U41 is intact. Otherwise motherboard will need repair.
30	Coin acceptor failure	Check whether wiring of coin acceptor is intact, whether there are stucked coins (NO signal format, slow speed of 45ms-65ms)
32	Prize out sensor detection failure	Check whether wiring to the sensors are correct, whether sensors are being blocked by prizes, whether sensors are aligned during installation, whether sensors are damaged; press S1 button to enter the test menu (10) sensors will perform a self-test, the receivers (3 lights) red and yellow will alternately flash to indicate sensors are normal.
33	Prize out sensor detection failure	Check whether wiring to the sensors are intact, whether they are being interfered by strong external lights, whether sensors are damaged.
Cable rewind	Cable winding failure	Press and hold the up micro-step (bottom one) then reboot, then release the micro-step, the rope will automatically calibrate itself. Repeat a few more times if needed, no need to manually cut the rope.

Note: whenever one of the above problems occur, press the S1 key of the main board to access the test menu for troubleshooting.

Thank you for purchasing our company's product. We constantly improve our products, therefore we reserve the rights to make changes to the content of this manual, without notice. If during the use of our product, you encounter a problem not mentioned in this manual or need an upgrade, feel free to contact us and we will be more than happy to provide our best service and respond to you promptly. We appreciate your strong support.

If you need help or want to know more information, please contact:

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